Attorney Reference Number 3382-64472-01
Application Number 10/622,378

Remarks

Reconsideration of the application is respectfully requested in view of the foregoing amendments and following remarks.

Claims 1-7, 10, 18-21 and 74-120 are pending in the application. Claims 8, 9, 11-17 and 22-73 are canceled without prejudice. No claims have been allowed. Claims 74-120 have been added. Claims 1, 18, 76, 85, 95, 105, 109 and 115 are independent.

Allowability of Claims Under 35 U.S.C. 102

The Action rejects pending claims 1, 3-7, 10 and 18-21 under 35 U.S.C. 102(e) as allegedly being anticipated by U.S. Patent Application Publication No. 2005/0129120A1 ("Jeon"). Applicants do not admit that Jeon is prior art to the present application and reserve the right to provide evidence of prior conception and/or reduction to practice.

For a rejection under 35 U.S.C. § 102 to be proper, the applied art must show each and every element as set forth in a claim. [*See* MPEP § 2131.] Applicants respectfully submit that the claims in their present form are allowable over the applied art because it does not teach or suggest all the claim limitations of claims 1, 3-7, 10 and 18-21.

Applicants respectfully traverse these rejections and submit that the claims in their present form are allowable over the applied art.

Independent Claim 1

As amended, independent claim 1 recites in part:

> receiving and decoding a code in a bit stream to determine a fraction for a current image in the sequence, wherein the fraction represents a selected temporal distance position for the current image relative to an interval between a first reference image for the current image and a second reference image for the current image, *and wherein the determination of the fraction is independent of actual temporal distance positions of the respective reference images.*

As amended, independent claim 18 recites in part:

> selecting a fraction for a current image in the sequence, wherein the current image has a previous reference image and a future reference image, wherein the fraction represents a selected temporal position for the current image relative to the respective reference images, *and wherein the selecting of the*

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>*fraction is independent of actual temporal positions of the respective reference images.*

Applicants respectfully disagree that Jeon teaches or suggests the above-cited language of claims 1 and 18, respectively.

The Examiner states, "Jeon discloses . . . determining a fraction for a current image in the sequence, wherein the fraction represents an estimated temporal distance position for the current image relative to an interval between a first reference image for the current image and a second reference image for the current image (fraction = TD b / TD d) . . . ." [Action at p. 2.] Jeon describes calculating direct mode motion vectors MV_F and MV_B according to equations such as "$MV_F = TD_B \times MV / TD_D$" and "$MV_B = (TD_B - TD_D) \times MV / TD_D$." [*See* Jeon at ¶ [0052].] According to Jeon, "TD_B represents a temporal distance between a current B frame and a list 0 reference frame, and TD_D represents a temporal distance between a list 1 reference frame and the list 0 reference frame." [*Id.* at ¶ [0053].] Thus, the direct mode motion vectors in Jeon *are computed using actual temporal distances of reference frames or fields. [See, e.g., id.* at ¶¶ [0052]-[0053], [0059]-[0060].]

Applicants disagree that Jeon teaches or suggests "the fraction represents a *selected* temporal distance position for the current image," as recited in claim 1, or "the fraction represents a *selected* temporal position for the current image relative to the respective reference images," as recited in claim 18. However, even if, for the sake of argument, equations such as "$MV_F = TD_B \times MV / TD_D$" in Jeon could be considered to show a fraction that represents a selected position for a current image, Jeon still does not teach or suggest "the determination of the fraction is *independent of actual temporal distance positions of the respective reference images*," as recited in claim 1, or "the selecting of the fraction is *independent of actual temporal positions of the respective reference images*," as recited in claim 18.

The present application describes example implementations of technology falling within the scope of claims 1 and 18. These example implementations have certain advantages over the prior art applied by the Examiner. For example, at page 27 the application states,

> As noted above, prior implementations scaled the motion vector of the corresponding macroblock in the future reference frame using timestamp-dependent temporal distances TR_D and TR_B. Fraction coding eliminates the need to find TR_D and TR_B. Furthermore, in some embodiments, an encoder can change the fraction to represent (e.g., at frame level) different inter-B-frame distances and

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different numbers of B-frames in a group of pictures. The fraction may or may
not reflect true interframe distances. Thus, described embodiments do not
necessarily assume constant velocity. . . .

Claims 1 and 18 are allowable. Claims 3-7 and 10 depend from claim 1 and are
allowable for at least the reasons given above in support of claim 1. Claims 19-21 depend from
claim 18 and are allowable for at least the reasons given above in support of claim 18.
Therefore, the rejections of claims 1, 3-7, 10 and 18-21 under 35 U.S.C. § 102 should be
withdrawn. Such action is respectfully requested. The Applicants will not belabor the merits of
the separate patentability of dependent claims 3-7, 10 and 19-21.

The rejection of claim 2 is addressed below.

Allowability of Claims Under 35 U.S.C. § 103

Claim 2 was rejected under 35 U.S.C. 103(a) as being unpatentable over Jeon.
Applicants respectfully traverse this rejection.

The applied art does not teach or suggest each and every element of dependent claim 2.
Although Jeon describes calculations of direct mode motion vectors using actual temporal
positions of reference frames or fields, Jeon does not teach or suggest, for example, "the
determination of the fraction is *independent of actual temporal distance positions of the
respective reference images*," as recited in claim 1, from which claim 2 depends.

Because the applied art does not teach or suggest at least one element of independent
claim 1, claim 2 is allowable for at least the reasons given above in support of its parent claim.
Therefore, the rejection of claim 2 under 35 U.S.C. § 103(a) should be withdrawn. Such action
is respectfully requested. The Applicants will not belabor the merits of the separate patentability
of dependent claim 2.

New Claims

Claims 74-120 have been added. Claims 74 and 75 depend indirectly from claim 1 and
are allowable for at least the reasons given above in support of claim 1. Independent claims 76,
85 and 95 include language similar to language in claim 1 and are also allowable. Independent
claims 105, 109 and 115 include language similar to language in claim 18 and are also allowable.

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New dependent claims 77-84, 86-94, 106-108, 110-114 and 116-120 depend directly or indirectly from allowable claims 76, 85, 95, 105, 109 and 115, respectively, and are allowable at least for that reason.

Support for the new claims can be found throughout the description in the Application. [*See, e.g.*, Application at pp. 24-28.]

Request For Interview

If any issues remain, the Examiner is formally requested to contact the undersigned attorney prior to issuance of the next Office Action in order to arrange a telephonic interview. It is believed that a brief discussion of the merits of the present application may expedite prosecution. Applicants submit the foregoing formal Amendment so that the Examiner may fully evaluate Applicants' position, thereby enabling the interview to be more focused.

This request is being submitted under MPEP § 713.01, which indicates that an interview may be arranged in advance by a written request.
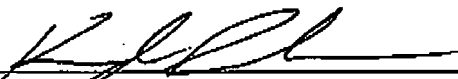
Conclusion

The claims in their present form should now be allowable. Such action is respectfully requested.

Respectfully submitted,

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